

**REMARKS**

**I.      Status of the Application**

Claims 4 – 8 are pending in the present application. Claim 4 is independent. Claims 1 – 3 were previously canceled without prejudice to and/or disclaimer of the subject matter therein.

Claims 4 and 6 – 8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 3,580,339 (“Nance”) in view of U.S. Patent No. 6,439,480 (“Velde”). Claim 5 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Nance in view of Velde and further in view of U.S. Patent No. 6,622,966 (“McConnell”).

The Applicant respectfully requests reconsideration of these rejections in view of the following remarks.

**II.     Remarks Regarding Independent Claim 4**

Independent claim 4, the sole independent claim, stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Nance in view of Velde. Claim 4 recites, in part:

... a restriction plate creating a leak-tight seal and being vertically mobile between stable guides within the reservoir such that the restriction plate decreases or increases the total volume available to be occupied by the fire fighting liquid in the reservoir;

... wherein the movement of the restriction plate acts to restrict the movement of the fire fighting liquid's center of gravity.

While Nance discloses a reservoir, launcher, and fuselage, this reference fails to teach a restriction plate as cited in the invention of claim 4.

However, the Examiner has claimed that Velde teaches claim 4's restriction plate limitation. Velde describes “a device for automatic spray application of paint.” (Velde at [54].) The device includes a “dosing apparatus [that] regulates the compression of an external surface against the inner volume of the paint container and thereby forces paint out of the container.”

(Velde at Abstract.) This apparatus, best seen in FIG. 2 of Velde, functions very much like a syringe, forcing paint in the container through a vertical nozzle at the container's far end. In this way, “[p]aint is pressed out of the nozzle, through an[] opening, by reducing the volume of space within the container for holding paint.” (*Id.* at col. 2, ll. 18 – 20.) Thus, the primary purpose of this apparatus is to “provide[] a very exact and reliable dosing of the paint” (*id.* at col. 2, ll. 21–22), rather than to stabilize the device as a whole.

In contrast, the restriction plate of the helicopter of the present invention “decreases or increases the total volume [of the] reservoir” to avoid instability during flight. This change in the volume in the reservoir restricts the movement of the fire fighting liquid inside the reservoir, thereby reducing shifts in the liquid’s center of gravity. This in turn helps to stabilize the helicopter during flight. Rather than rely on a moveable plate to force liquid out of a container, as in Velde, the helicopter of claim 4 uses a high-pressure pump to draw the fire fighting liquid from the reservoir. Thus, the helicopter recited by claim 4 of the present application does not depend on the restriction plate to draw liquid out of the reservoir, unlike the syringe-like apparatus of Velde, which relies on a movable plate to force paint out of a container.

Additionally, Velde does not describe a device that uses the movement of a plate to control the center of gravity of a high-pressure liquid. Rather, Velde merely discloses a means for forcing paint out of a container in a way nearly identical to a syringe. Nothing in Velde even suggests that a movable plate may be used to control stability of a helicopter by restricting the center of gravity of the liquid inside a reservoir within the helicopter. This use would not have been obvious to one of ordinary skill.

Accordingly, the restriction plate apparatus recited by claim 4 of the present application drastically differs from the syringe-like apparatus of Velde. Further, the limitation that the restriction plate restricts the movement of the center of gravity of a fire fighting liquid inside a

reservoir is not found in Velde. For these reasons, the Applicant respectfully submits that Velde does not make up for the deficiencies of Nance and requests that the rejection of claim 4 (and all claims depending therefrom) be withdrawn.

### **III. Remarks Regarding Use of Non-Analogous Art**

In addition to the above remarks, the Applicant respectfully submits that Velde is not analogous art. As the Examiner is aware, a reference must be analogous art in order to form the basis for an obviousness rejection. M.P.E.P. § 2141.01(a). In order to be analogous, the reference must be reasonably pertinent or within the inventor's field of endeavor in order to be used in an obviousness rejection. *Id.*

While the present application is directed to a helicopter used in fighting fires, Velde is directed to a paint spraying device that uses a syringe-like apparatus to dispense paint. The field of automatic spray painting is a field that is totally unrelated to the field of devices for fighting fires in remote areas. Simply showing the use of a motorized plate in a totally different field would not lead a person of ordinary skill in the art to devise the restriction plate as claimed. Furthermore, a person of ordinary skill in designing devices for fighting fires would not logically look to the field of automatic spray painting for a solution to the problem of maintaining a static center of gravity in a liquid-filled reservoir. Indeed, nothing in Velde suggests that the syringe-like apparatus would have any effect on the center of gravity of the paint in the container such that the device as a whole would be stabilized. Furthermore, this solution would not have been obvious to one of ordinary skill. It is respectfully submitted that it is illogical and unreasonable that an inventor seeking to find a solution for restricting the movement of the center of gravity in a reservoir would have looked to the field of spray painting for inspiration.

Accordingly, the Applicant respectfully submits that Velde is non-analogous art and may

not be used in the obviousness rejection as alleged. Because Velde relates to different technical arts having different objectives for different problems, the Applicant respectfully submits that they should not be used to modify the base references as alleged in the obviousness rejection.

Further, the Applicant respectfully submits that none of the other references address the deficiencies of Nance. As discussed in *KSR Int'l Co. v. Teleflex, et al.*, No. 04-1350, (U.S. Apr. 30, 2007), the Applicant respectfully submits that it remains necessary to identify the reason why a person of ordinary skill in the art would have been prompted to combine alleged prior art elements in the manner as claimed by the Applicant and it is respectfully submitted that obviousness cannot be sustained on mere conclusory statements.

The Applicant respectfully submits that Velde is not prior art and thus may not be used in an obviousness rejection. For at least these reasons, the Applicant requests that the rejection of claim 4 and its dependent claims be withdrawn.

**IV. Conclusion**

In light of the above remarks, the Applicant respectfully submits that the present application is in condition for allowance. The Applicant earnestly solicits favorable reconsideration and issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4420 to discuss any matter concerning this application. **The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.**

Respectfully submitted,

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